Research Notes

Tax and Taxable Capacity: Ireland in Comparative Perspective

Tim Callan and Michael Savage

Tax and Taxable Capacity: Ireland in Comparative Perspective

T. Callan, M. Savage

Introduction

What role can increases in tax revenue be expected to play in Ireland's transition to a new long-run fiscal equilibrium? Ireland is widely perceived as having had a low tax regime through the boom and bubble period. Tax increases have featured strongly as part of Ireland's economic adjustment programme. How much scope is there for further increases? Has Ireland come close to the limits of tax revenue from incomes? In this note, we provide some international perspectives on these issues. We build on the approach proposed by the Irish Fiscal Advisory Council – a hybrid measure of GDP and GNP to represent Ireland's taxable capacity – to provide more meaningful comparisons of tax ratios in Ireland and in other EU countries.

Measuring Taxable Capacity

GDP is commonly used as a broad indicator of taxable capacity in international comparisons, with ratios of tax revenue to GDP indicating the extent to which that capacity is used. For most countries, levels of GDP and GNP are quite similar. Table 1 shows that Ireland and Luxembourg are outliers in the EU-27, with GDP more than 20 per cent higher than GNP. The difference between the two is net factor payments, outflows which are largely due to the repatriation of profits by multinational companies. For the other 13 countries in the EU-15 group the ratio of GDP to GNP is close to unity (within the range 97 per cent to 104 per cent).

TABLE 1 Ranking of EU 27 Countries by Ratio of GDP to GNP, 2011

Country	GDP to GNP ratio
Luxembourg	*1.39*
Ireland	*1.24*
Czech Republic	1.08
Malta	1.07
Estonia	1.05
Hungary	1.05
Poland	1.05
Lithuania	1.04
Portugal	*1.04*
Greece	*1.03*
Bulgaria	1.03
Slovakia	1.02
Spain	*1.02*
Slovenia	1.01
Austria	*1.01*
Romania	1.01
Italy	*1.01*
Cyprus	1.00
Latvia	0.99
Finland	*0.99*
Netherlands	*0.99*
United Kingdom	*0.99*
Belgium	*0.99*
Sweden	*0.98*
Germany	*0.98*
France	*0.98*
Denmark	*0.97*

Source: European Commission website, http://ec.europa.eu/economy_finance/ameco/ series UVGD (Gross Domestic Product) and UVGN (Gross National Income)

Note: EU-15 countries are in italics.

McCarthy (2004, 2010) has argued that the lower potential tax yield from net factor outflows means that, faced with a choice between GDP and GNP as a measure of taxable capacity, it is GNP which should be preferred. The Irish Fiscal Advisory Council (IFAC, 2012) reconsidered these arguments and came to the view that

> *Taking either of the extremes of GDP or GNP is problematic. GDP is problematic as a measure of fiscal capacity because a euro of the excess of GDP over GNP (which is dominated by multinational profits) is likely to provide less revenue capacity than a euro of GNP. On the other hand, going to the other extreme of using just GNP puts zero weight on the revenue potential of the excess component. This suggests the value of a hybrid measure, where an appropriate relative value is placed on a euro of the excess component relative to a euro of GNP.*

Econometric analysis by IFAC suggests that a hybrid measure, using all of GNP and 40 per cent of the excess of GDP over GNP (i.e., 40 per cent of net factor

outflows) may provide a useful alternative measure of fiscal capacity. In our view this hybrid measure is better than either GNP or GDP alone, and the conclusions we draw from this approach are valid for a range of values around the central estimate.[1]

One interpretation of these results is that the estimates reflect the low rates of corporation tax which have been in force in Ireland for many years. In principle, it could be argued that the taxable capacity of net factor outflows (what IFAC terms the excess of GDP over GDP) is greater than that estimated on this basis. There are, however, three considerations which suggest that the future taxable capacity of net factor income from abroad may be no higher than that estimated from the past.

1. The highest effective tax rates on corporate profits are found in the five largest EU economies (Germany, France, the UK, Italy and Spain) and also in Malta. For almost all other EU countries, the effective rates are between 10 and 25 per cent. (Elschner and Vanborren, 2009, using the Devereux-Griffith approach to identifying the effective average tax rate on corporate profits – see Devereux and Griffith, 2003, for details of the approach.)
2. Work by Conefrey and FitzGerald (2011) finds that a cut in corporation profits tax led to a rise in activity; a rise in tax would therefore be expected to reduce the base to which the profits tax applied.
3. Moves towards a common consolidated corporation tax base, using such metrics as sales or employment, would tend to apportion more of corporation tax receipts to larger countries.

For these reasons we assume, in what follows that the effective tax rate applying to the profits of multinational companies operating in Ireland remains close to current levels.

International Comparisons

To date, comparisons of Ireland's tax to national income ratio with those of other countries have been based largely on OECD statistics, which use GDP as the denominator for all countries. For the reasons set out above, we argue that this is not an appropriate measure in the Irish context. Here we present results on the basis of the hybrid measure proposed by IFAC (Table 2). When this correction for the effective size of the tax base is used, Ireland's tax to national income ratio is 4

[1] Net factor outflows are net of Irish tax paid by multinationals. In principle, it would be preferable to estimate a regression based on total multinational profits, and the remainder of GDP; but the broad import of the results for present purposes would be similar.

percentage points higher than the tax/GDP ratio commonly used. Ireland remains a relatively low tax country – but is no longer an outlier; instead it has a slightly higher tax to income ratio than Spain, Greece and Portugal in the EU-15. The severity of the recession in Ireland makes it likely that an economic upturn will tend to raise Ireland's tax ratio relative to countries currently experiencing less severe downturns.

TABLE 2 Total Taxes as a Proportion of National Income, EU-15 countries, 2011

Country	Percentage of National Income
IRELAND–GDP	28.5
Greece	31.2
Portugal*	31.3
Spain	31.6
IRELAND–hybrid GDP and GNP	32.5
United Kingdom	35.5
Germany	37.1
Luxembourg	37.1
Netherlands*	38.7
Austria	42.1
Italy	42.9
Finland	43.4
Belgium	44.0
France	44.2
Sweden	44.5
Denmark	48.1

Source: OECD *Revenue Statistics*, www.oecd.org

Notes: Taxes on individual income constructed from OECD categories 1100 (Taxes on Income, Profits and Capital Gains of individuals) plus Social Security Contributions (category 2000, including contributions by employees, employers and self-employed). Income tax and capital gains taxes on corporations are not included.

* Indicates that 2010 is the latest available year.

Even within the EU-15 countries, there is a wide range of tax to GDP ratios – from 31 or 32 per cent in Spain, Greece and Portugal to 48 per cent in Denmark. There is therefore, considerable variation between countries in the set of government provided services and redistributive transfers that these societies are willing to finance. (For a historical perspective, see the ESRI Geary lecture by Besley, 2012).

Next we focus on taxes relating to individual income. Broad measures of income taxes tend to include income taxes and capital gains taxes paid by corporations, but these are excluded here, as the factors driving them are quite different. In Table 3 we use the detailed OECD statistics to include income tax and social security contributions, excluding corporate income taxes. Net factor outflows from repatriated profits do not form part of the base for such income taxes: GNP is a more appropriate measure. Thus, for Ireland, we present a figure based on

GDP (as commonly shown in international comparisons) and a figure based on GNP, which we argue gives a more appropriate comparison.

TABLE 3 Taxes on income of individuals as a proportion of national income, 2011

Country	Percentage of National Income
Ireland–GDP	13.8
Portugal*	14.6
Greece*	15.3
United Kingdom	16.8
Ireland–GNP	17.3
Spain	19.2
Luxembourg	19.2
Sweden	22.4
Netherlands*	22.7
Germany	23.5
France	24.3
Austria	24.4
Italy	24.5
Finland	25.3
Belgium	26.5
Denmark	27.6

Source: OECD *Revenue Statistics*, www.oecd.org.

Notes: Taxes on individual income constructed from OECD categories 1100 (Taxes on Income, Profits and Capital Gains of individuals) plus Social Security Contributions (category 2000, including contributions by employees, employers and self-employed). Income tax and capital gains taxes on corporations are not included.

* Indicates that 2010 is the latest available year.

As with the overall tax ratio, Ireland emerges as one of a group of low tax rate countries, rather than the very lowest. Using the more appropriate GNP-based figure, Ireland's income tax to national income ratio is 17.3 per cent – about 3½ per cent higher than the GDP based figure. This is slightly higher than in the UK, and above the levels in Greece and Portugal – whereas the GDP based figures suggest that Ireland has the lowest rate in the EU-15.

Similar average tax rates may have quite different implications for the marginal tax rates faced by individuals – much depends on the extent of exclusions from the tax base and the rate structure of the income-related taxes. Detailed microsimulation analysis is needed to assess the impact of different tax systems on the effective marginal tax rates faced by individuals in different countries. There has been limited cross-country analysis on this topic (Immervoll, 2004, is one such study, but the data and policies in this analysis are from the mid-1990s). However, recent studies by Adam and Browne (2010) for the UK and by Callan *et al.* (2011) for Ireland suggest that there may be scope for a bilateral comparison, based on models which have a very similar framework.

Taxes on expenditure vary much less across the EU. This may be partly due to the introduction of explicit harmonization, but competitive pressures may also contribute to this result. For 11 out of the EU-15 countries, including Ireland, the share of such taxes in GDP was between 10 and 12½ per cent in 2010. Higher values of between 13 and 15 per cent are recorded in Finland, Sweden and Denmark. Thus, the gap between the Irish tax ratio and that in the highest taxed countries is much less for this form of tax.

Conclusions

In the diagnosis of Ireland's public finance crisis, there has been a widespread perception of Ireland as having become a "low tax" economy over the boom and bubble period, with income taxes in particular cut to low levels while stamp duties and capital gains taxes sustained the public purse. There is a great deal of truth in this diagnosis. However, international comparisons based on GDP give rise to an exaggerated picture. Taxes on corporate profits tend to be lower than average tax rates on GNP in all EU 15 countries; and the size of the flow of repatriated profits from Ireland is particularly large. The hybrid measure examined by IFAC provides a useful approach in adjusting the size of the estimated tax base. When this is done Ireland's tax ratios are significantly higher than GDP-based figures would suggest.[2] They place Ireland in a group of low tax rate countries that includes Spain, Greece and Portugal. Similar remarks apply when focusing on individual income tax and social security contributions, where Ireland had a slightly higher tax ratio than the UK in 2011. Comparisons of marginal effective tax rates, based on detailed microsimulation analysis, would be of value and possible approaches to this are being examined.

[2] By the same token, calculations of expenditure to national income ratios would also show higher figures in relation to the hybrid construct.

References

Adam, S., M. Brewer and A. Shephard, 2006. "Financial Work Incentives in Britain: Comparisons Over Time and Between Family Types", Institute for Fiscal Studies, Working Paper WP06/10.

Adam, S. and J. Browne, 2010. "Redistribution, Work Incentives and 30 Years of Tax Reform" Institute for Fiscal Studies, Working Paper 10/24.

Besley, T., 2012. "Making and Breaking Tax Systems: The Institutional Foundations of Fiscal Capacity", ESRI Geary Lecture, 19 October 2012.

Callan, T., N. Crilly, C. Keane, J.R. Walsh and Á. Ní Shúilleabháin, 2011. "Tax, Welfare and Work Incentives" in T. Callan (ed.), *Budget Perspectives 2012*, Dublin: The Economic and Social Research Institute, Research Series No. 22.

Conefrey, T., J. FitzGerald, 2011. "The Macro-economic Impact of Changing the Rate of Corporation Tax", *Economic Modelling,* Vol. 28, No. 3, pp. 991-999.

Devereux, M.P. and R. Griffith, 2003. "Evaluating tax policy for location decisions", *International Tax and Public Finance*, Vol. 10, pp. 107-126.

Elschner, C. and W. Vanborren, 2009. "Corporate effective tax rates in an enlarged European Union", European Commission Taxation Paper No. 14, downloadable at http://tinyurl.com/37trca5

European Commission, 2011. *Taxation Trends in the European Union,* Luxembourg: Eurostat.

FitzGerald, J. and I. Kearney, 2011. "Irish Government Debt and Implied Debt Dynamics: 2011-2015", *Quarterly Economic Commentary*, Autumn 2011, Dublin: Economic and Social Research Institute.

Honohan, P., 2009. Opening Address to the ESRI/Foundation for Fiscal Studies Budget Perspectives Conference, 13 October 2009. http://tinyurl.com/blxmtp7

Immervoll, H., 2004. "Average and Marginal Effective Tax Rates Facing Workers in the EU: A Micro-Level Analysis of Levels, Distributions and Driving Factors", OECD Social, Employment and Migration Working Papers, No. 19, http://dx.doi.org/10.1787/652730151886

Irish Fiscal Advisory Council, 2012. *Fiscal Assessment Report,* September.

Mirrlees, J.A., 2011. *Tax by Design: The Mirrlees Review*, Oxford: Oxford University Press.

McCarthy, C., 2004. "Volatility in Irish Quarterly Macroeconomic Data", *Quarterly Economic Commentary*, Dublin: Economic and Social Research Institute.

McCarthy, C., 2010. "Fiscal Adjustment and Macroeconomic Re-balancing in Ireland" Dublin: *Journal of the Statistical and Social Inquiry Society of Ireland*, Vol.XXXIX , pp.70-78.

OECD, 2011. *Revenue Statistics*, Paris: OECD.